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(12) (19) (CA) **Demande-Application**

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(54) **SOUPAPE DE CONTROLE POUR LE DRAINAGE DE L'HUILE**
(54) **OIL DRAIN CONTROL VALVE**

(57) Selon la technique habituelle, la vidange d'huile se fait en dévissant le bouchon de vidange du carter d'huile et en laissant l'huile usée couler dans un bac récepteur. La présente invention propose de remplacer le bouchon de vidange par un robinet ayant un embout à filetage approprié d'un côté et un raccord rapide de l'autre côté, ledit raccord étant adapté pour recevoir aussi bien un flexible qu'un bouchon. Le flexible a pour fonction de faciliter la tâche tout en réduisant ou éliminant les déversements d'huile. Le bouchon est conservé pour protéger le raccord rapide et servir de fermeture d'appoint en cas de fuite au robinet.

(57) For the task of oil changes, when emptying the oil from the oil pan, it is known to remove the oil plug and let the contaminated oil drain into a catch basin. In this invention, the oil plug is replaced with a properly threaded valve having a quick connect fitting at the other end. The quick connect end is for fitting either a hose or a plug. The hose is to facilitate the job and at the same time reduce or eliminate spillage. The plug is to protect the quick connect and to act as a back up seal for the valve.

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1 – ABSTRACT

For the task of oil changes, when emptying the oil from the oil pan, it is known to remove the oil plug and let the contaminated oil drain into a catch basin. In this invention, the oil plug is replaced with a properly threaded valve having a quick connect fitting at the other end. The quick connect end is for fitting either a hose or a plug. The hose is to facilitate the job and at the same time reduce or eliminate spillage. The plug is to protect the quick connect and to act as a back up seal for the valve.

2 – SPECIFICATION

This invention relates to a permanently installed manually operated valve and removable, preferably transparent, hose. This apparatus is used to control the flow, direction, and destination of oil from the oil pan of most engines.

PRESENT PRACTICE:
It is common practice to remove the engine oil plug to let the oil drain in a catch basin. In this method there is no control of the flow that may and often does result in spillage. Also when the plug is removed it may be accidentally dropped into the container thereby having to retrieve it from the catch basin which is being uncontrollably filled by contaminated oil. For reasons, such as overfilling, it is very difficult to remove a measured amount of oil. When reinstalling the oil pan drain plug it is possible to cross thread the plug resulting in improper seating and leakage, which could require costly repair. Often the oil pan plug is in an awkward and difficult location for removal and reinstallation. In tight quarters an oil catch basin will not fit resulting in oil spillage and difficult clean up. Also once the oil is in an oil catch basin it needs to be emptied into a sealable container for transportation. This creates more handling which creates more labor and more opportunity for spillage.

The inventive idea of replacing the oil plug with a control valve adapted with a quick connect for a hose to control and direct the flow immediately to a sealable container. This process overcomes the difficulties and inconveniences of the previous practice.

This unit is a drain flow control valve, with a removable quick connect hose, designed to replace the engine oil plug. The idea is to facilitate oil changes for the average person while keeping the environment and personal safety a priority.

The basic design is a ball valve threaded at one end to fit particular oil pan drain plug specifications including universal threads. The other end would have a quick connect thread to accommodate a hose and or plug.

Valve mechanism & threads can be changed pending efficiency, costs, location, available space & manufacturer's specifications.

PURPOSE & USAGE:

1. To control the flow of oil during oil changes.
2. To channel the oil directly to a sealable container.
3. To prevent oil spillage.
4. For personal safety by preventing contact of contaminated oils with skin.
5. To protect the environment from oil contaminants due to spillage.
6. To eliminate the need of an oil catch basin and funnel.
7. To lower the level of oil in the pan due to over filling.
8. To possibly extend engine oil life by draining some sedimented oil and replacing it with fresh oil.
9. For marine use, due to the awkward and tight quarters, it would facilitate and control the oil changes and probably greatly reduce oil contaminants from the water ways.
10. Could prevent the cross threading of the oil pan plug.
11. Would prevent the possible loss of or the dropping of the oil pan plug into the dirt or oil cache basin.

LIMITATIONS:

1. Oil flow restriction due to the thread body.
2. In some instances the valve should not be installed due to the location of the drain. This situation could put the valve in a vulnerable area which in turn could cause the valve to be sheared off. The result would be a loss of oil in the oil pan.
3. If valve is not properly closed it could result in oil loss.

3 – CLAIMS

This inventive idea comprises of replacing an engine oil plug with a drain flow control valve complete with a removable quick connect hose, which in turn can be replaced with a quick connect plug, in order to facilitate oil changes and reduce or eliminate spillage & cleanup.

The idea is to facilitate oil changes for the average person while keeping the environment and personal safety a priority.

The installed valve will control the flow of oil from the oil pan.

The removable, preferably clear for visual purposes, hose will allow the flow of oil to be contained, directed and emptied into a container of choice.

The invention is to reduce and/or eliminate oil spillage while emptying the oil from an engine oil pan.

The invention is to improve personnel safety by reducing the chance of contact of hot, contaminated oil with human skin.

The invention will also eliminate the need for an oil catch basin, funnel and plug removal tool(s).

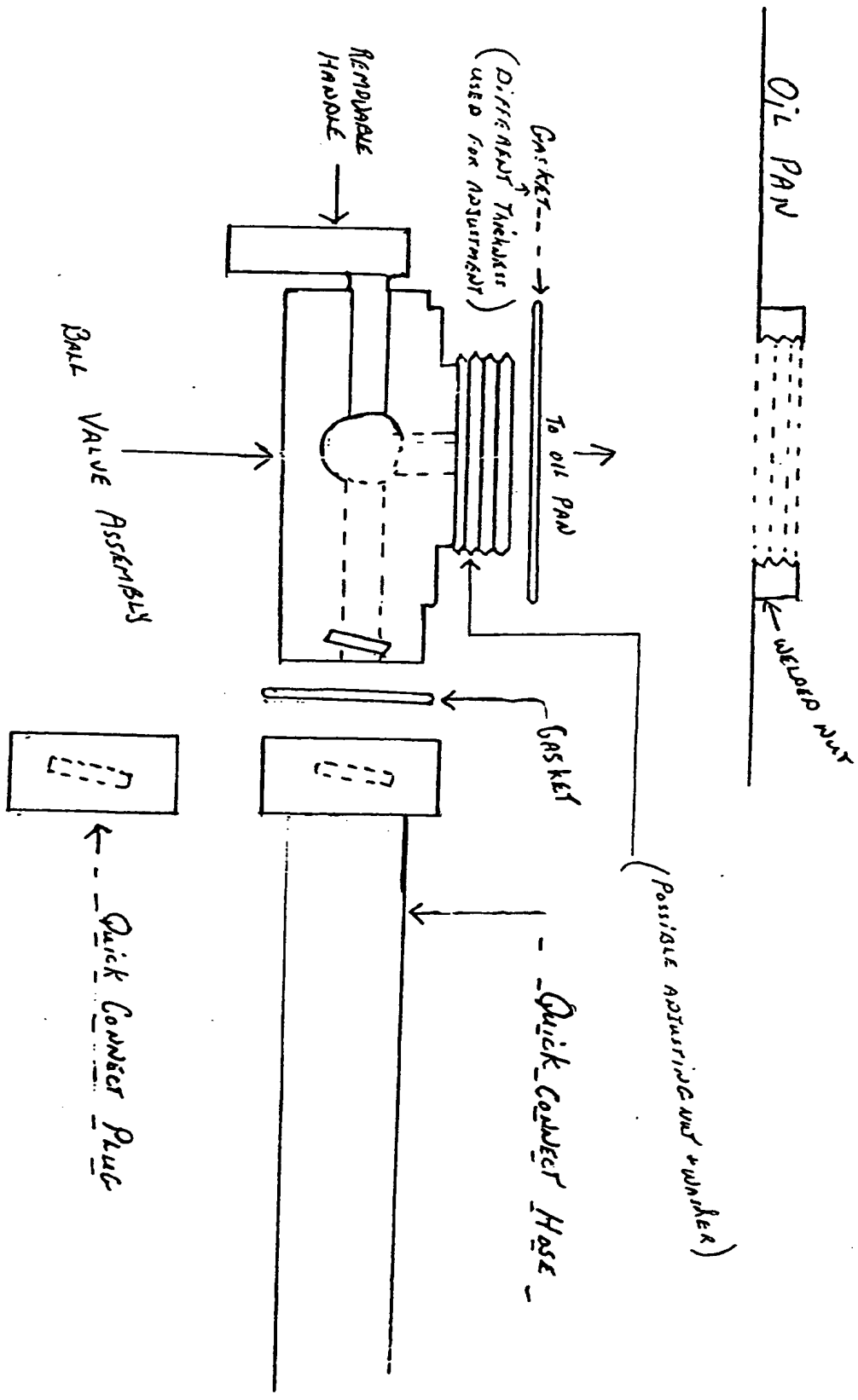
The invention will allow a measured amount of oil to be withdrawn from the engine oil pan.

The invention is particularly needed in confined and/or awkward and/or tight quarters to dramatically improve the ease of removing oil from the engine oil pan.

The invention would prevent the possibility of cross threading the oil pan drain plug.

The invention would easily adapt to a pump for speedier oil removal.

NOTE:
Valve mechanism and threads may be changed pending efficiency, costs, location, and available space & manufacturer's specifications



NOT DRAWN TO SPECIFICATIONS